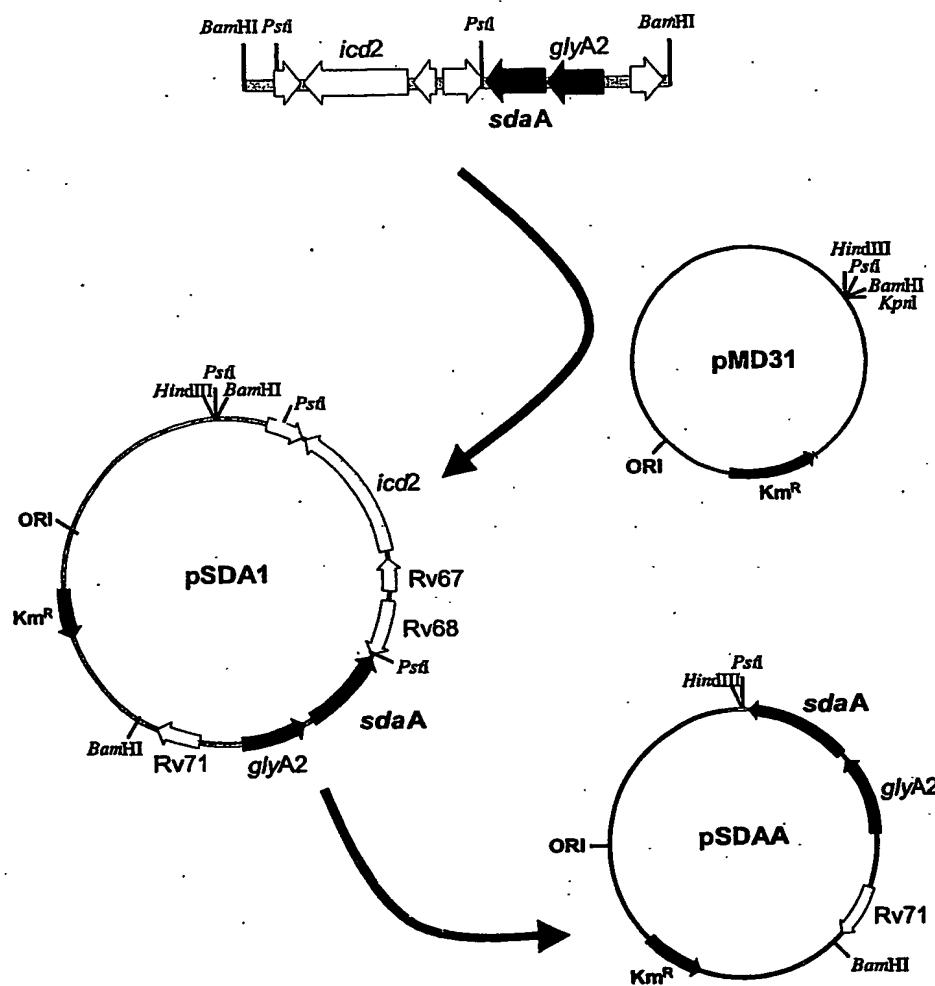
**Fig. 1**

**Fig. 2**

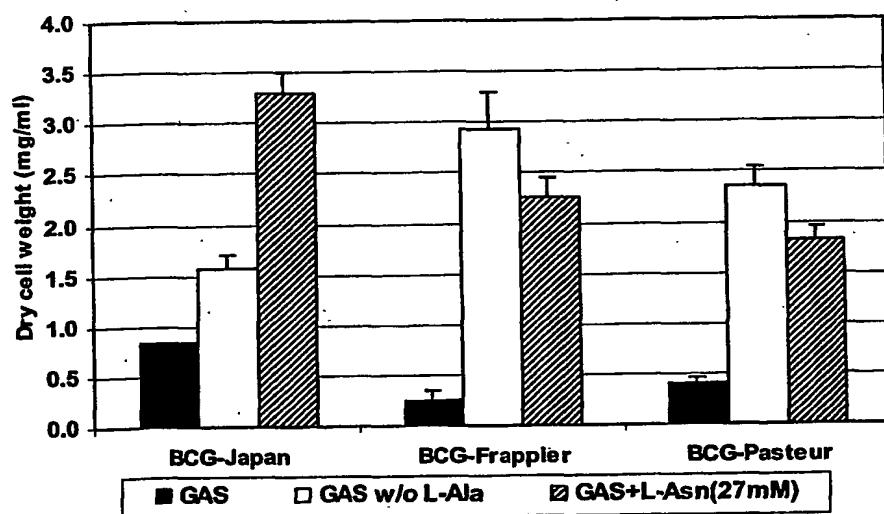


Fig. 3

3 / 9

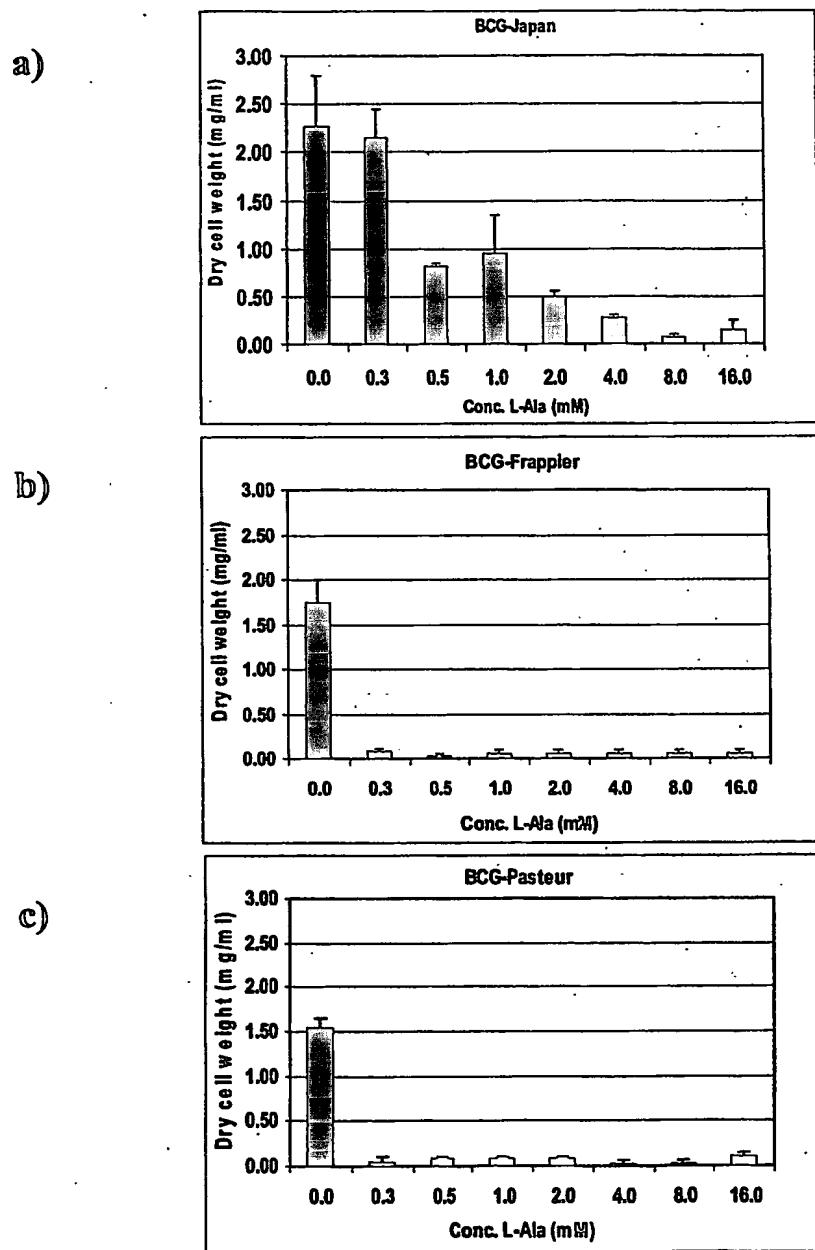


Fig. 4.

4 / 9

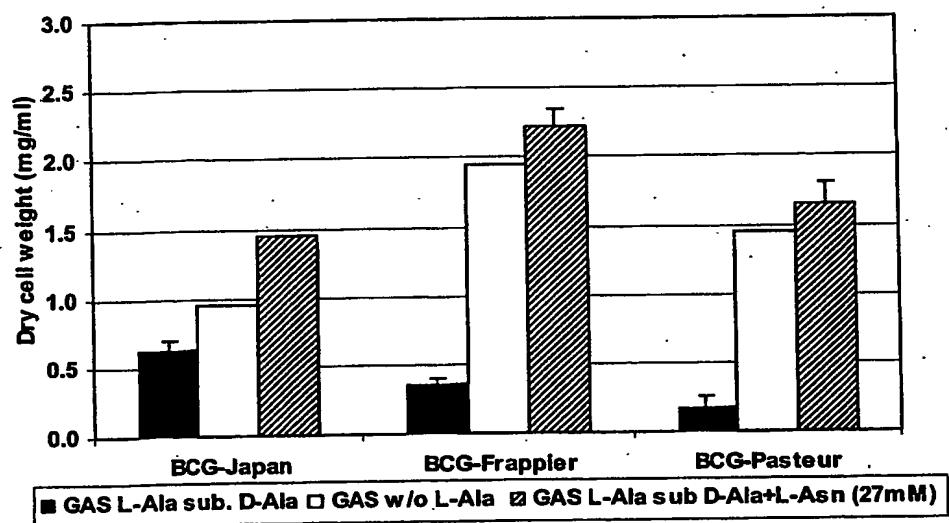


Fig. 5

5 / 9

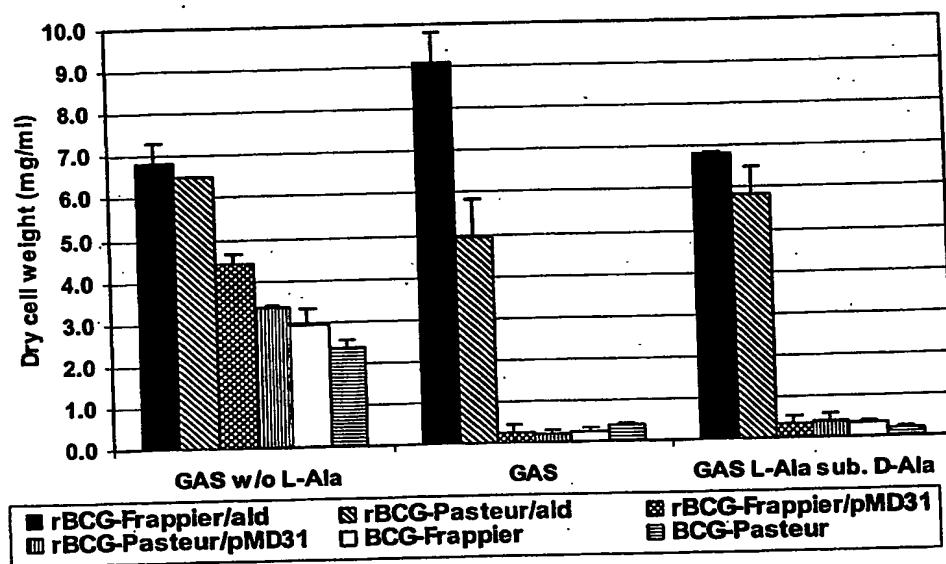


Fig. 6

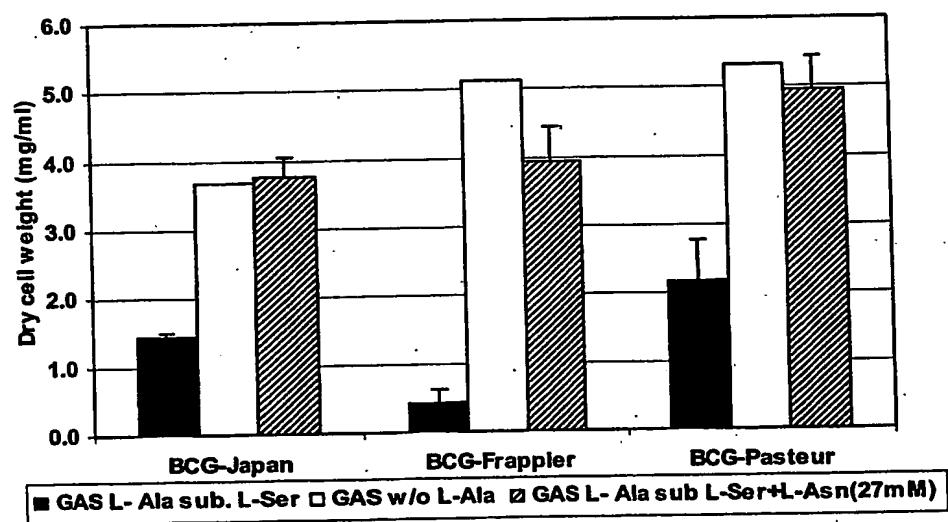


Fig. 7

7 / 9

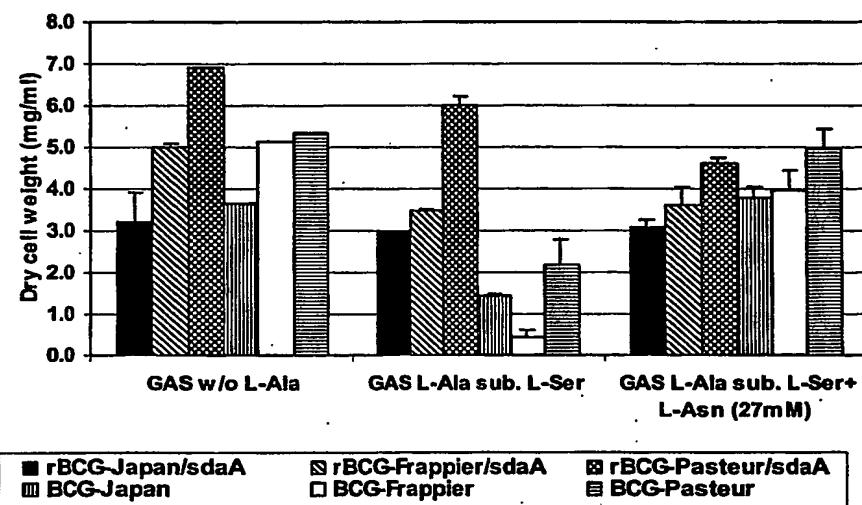


Fig. 8

A

M. tb ATG CGC GTC GGT ATT CCG ACC GAG ACC AAA AAC AAC GAA TTC CGG GTG GCC ATC
M. bovis ATG CGC GTC GGT ATT CCG ACC GAG ACC AAA AAC AAC GAA TTC CGG GTG GCC ATC

M. tb ACC CGG GCC GGC GTC GCG GAA CTA ACC CGT CGT GGC CAT GAG GTG CTC ATC CAG
M. bovis ACC CGG GCC GGC GTC GCG GAA CTA ACC CGT CGT GGC CAT GAG GTG CTC ATC CAG

M. tb GCA GGT GCC GGA GAG GGC TCG GCT ATC ACC GAC GCG GAT TTC AAG GCG GCA GGC
M. bovis GCA GGT GCC GGA GAG GGC TCG GCT ATC ACC GAC GCG GAT TTC AAG GCG GCA GGC

M. tb GCG CAA CTG GTC GCC ACC GCC GAC CAG GTG TGG GCC GAC GCT GAT TTA TTG CTC
M. bovis GCG CAA CTG GTC GCC ACC GCC GAC CAG GTG TGG GCC GAC GCT GAT TTA TTG CTC

M. tb AAG GTC AAA GAA CGG ATA CGC CGG GAA TAC GGC CGC CTG CGA CAC GGG CAG ATC
M. bovis AAG GTC AAA GAA CGG ATA CGC CGG GAA TAC GGC CGC CTG CGA CAC GGG CAG ATC

↑

M. tb TTG TTC ACG TTC TTG CAT TTG GCC GCG TCA CGT GCT TGC ACC GAT GCG TTG TTG
M. bovis TGT TCA CGT TCT TGC ATT TTG CGG CGT CAC GTG CTT GCA CGG ATG CGT TGT TTG

M. tb GAT TCC GGC ACC ACG TCA ATT GCC TAC GCG ACC GTC CAG ACC GCC GAC GGC GCA
M. bovis ATT CGG GCA CCA CGT CAA TTG CCT ACG AGA CGG TCC AGA CGG CGG CGG AGG CGG CAC

M. tb CTA CCC CTG CTT GCC CGG ATG AGC GAA GTC GCC GGT CGA CTC GCC GCC CGG GTT
M. bovis TAC CCC TGC TTG CCC CGA TGA

M. tb GGC GCT TAC CAC CTG ATG CGA ACC CAA GGG CGC CGC GGT GTG CTG ATG GGC GGG
M. tb GTG CCC GGC GTC GAA CGG GCC GAC GTC GTG GTG ATC GGC GCC GGC ACC GCC GGC
M. tb TAC AAC GCA GCC CGC ATC GCC AAC GGC ATG GGC GCG ACC GTT ACG GTT CTA GAC
M. tb ATC AAC ATC GAC AAA CTT CGG CAA CTC GAC GCC GAG TTC TGC GGC CGG ATC CAC
M. tb ACT CGC TAC TCA TCG GCC TAC GAG CTC GAG GGT GCC GTC AAA CGT GCC GAC CTG
M. tb GTG ATT GGG GCC GTC CTG GTG CCA CGG GCC ARG GCA CCC AAA TTA GTC TCG ATT
M. tb TCA CTT GTC CGG CAT ATG AAA CCA GGT GCG GTA CTG GTG GAT ATA GCC ATC GAC
M. tb CGG GGC CGC TGT TTC GAA CGG TCA CGA CGG ACC ACC TAC GAC CAC CGG ACG TTC
M. tb GCC GTG CAC GAC ACG CTG TTT TAC TGC GTG GCG AAC ATG CGG CGC TCG GTG CGG
M. tb AAG ACG TCG ACC TAC CGC CTG ACC AAC GCG ACG ATG CGG TAT GTG CTC GAG CTT
M. tb GCC GAC CAT CGC TGG CGG CGG GCG TGC CGG TCG AAT CGG GCA CTA GCC AAA GGT
M. tb CTT TCG ACG CAC GAA CGG CGG GCG TTA CTG TCC GAA CGG GTG CGC ACC GAC CTG GGG
M. tb GTG CGG TTC ACC GAG CGC CGC AGC GTG CTG CGC TGA

B

M. tb MRVGIPTETKNEPRVAITPGVAILTRRGHEVLIQAGAGEGSAITDADPKAAGAQQLVGTADQVWADADIL
M. bovis MRVGIPTETKNEPRVAITPGVAILTRRGHEVLIQAGAGEGSAITDADPKAAGAQQLVGTADQVWADADIL

M. tb LKVKEPIAAEYGRRLRGGQILFTFLHLAASRACTDALLDSTTSIAYETVTQTAGDALPLIAPMSEVAGRLAA
M. bovis LKVKEPIAAEYGRRLRGGCSRSCLIWPRVLAIPMRCWIPAPEQPLTPRSPPTAHYPCLPR-

M. tb QVGAYHLMRTQGGGRGVLMGGVPGVEPADVVVIGAGTACGYIAARIANGMGTVTVDINIDKLQLDAEPQG

M. tb RIHTTRYSSAYELEGRAVKRADILVIGAVLVPGAKAPKLVNSLIVAHMKPGAVLVDIAIDQGGCPFGSRPTTYD

M. tb HPTPAVHDTLFPCVANMPASVPKTSTYALINATMPVYLELADHGWRRAACRSNPALAKGLSTHEGALLSERV

M. tb ATDLGVPPTEPASVLA-

Fig. 9